



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/786,588

02/26/2004

Michiaki Kuroiwa

009683-500

4346

21839 7590 05/16/2006

BUCHANAN INGERSOLL PC  
(INCLUDING BURNS, DOANE, SWECKER & MATHIS)  
POST OFFICE BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER

RAHMAN, FAHMIDA

ART UNIT

PAPER NUMBER

2116

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/786,588

Applicant(s)

KUROIWA, MICHIAKI

Examiner

Fahmida Rahman

Art Unit

2116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/26/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-6 are pending.

### **Information Disclosure Statement**

The information disclosure statement (IDS) submitted on 2/26/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### **Priority**

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy filed on 2/26/2004 has been received.

Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a translation of the foreign application should be submitted under 37 CFR 1.55 in reply to this action.

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2116

Claims 1, 3, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admission of Prior Art, in view of Chapuis (US Patent 6933709).

For claim 1, Applicant's Admission of Prior Art teach the following information:

A microcomputer, comprising: a microcomputer unit; and a power supply circuit controlling power supply voltage for said microcomputer unit, said power supply circuit including a power supply input terminal to which external power supply voltage is applied, a low pass filter provided between said power supply input terminal and said microcomputer unit (lines 10-26 of page 1 of applicant's disclosure mention that microcomputer takes voltage from power supply circuit and the power supply circuit has the input terminal for taking DC voltage and the power supply circuit has a low pass filter) and a switch element connected between said power supply input terminal and said microcomputer unit (lines 15-16 of page 1 mentions that low impedance circuit switches an internal switch. The switch element is in between power supply input terminal and microcomputer unit)

AAPA does not teach the following limitations:

a switch element connected in parallel with said low pass filter and a control circuit controlling on and off of said switch element.

Chapuis teaches

A power supply circuit controlling power supply voltage (Fig 1) including:

Art Unit: 2116

A power supply input terminal to which external power supply voltage is applied (Vin)

A low pass filter (16 and 18)

a switch element (12, 14) connected in parallel with a low pass filter (16 and 18), and a control circuit (30) controlling on and off of said switch element (22 and 24).

It would have been obvious for an ordinary skill in the art at the time the invention was made to combine AAPA with Chapuis. One ordinary skill in the art would have been motivated to have switches and controller to control the switches as taught in Chapuis, since that would regulate the output voltage at a desired level (line 36 of column 4)

For claim 3, Ref in Fig 1 of Chapuis is the predetermined voltage.

For claim 4, 30 of Chapuis can be thought as a register, since 30 stores and provides control for switches.

For claim 6, 34 of Chapuis takes coefficients that must come from a memory. However, Chapuis does not teach that the memory is in a microcomputer.

One ordinary skill in the art would be motivated to have the memory in a microcomputer, since microcomputer can provide the necessary control signal to 34 through GUI and other user interface.

Art Unit: 2116

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admission of Prior Art, in view of Chapuis (US Patent 6933709), further in view of Chapuis et al (US Patent 7000125).

AAPA in view of Chapuis does not teach flash memory within a microcomputer is controlling the controller.

Chapuis et al teach that a microcomputer (102) comprises non-volatile memory (123) to hold control parameter to control the controller 126.

One ordinary skill in the art would be motivated to have the non-volatile memory in a microcomputer holding control parameters, since microcomputer can provide the necessary control through user interface. One ordinary skill in the art would have been motivated to have a flash memory as the non-volatile memory, since flash memory is cheap and available.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admission of Prior Art, in view of Chapuis (US Patent 6933709), further in view of Georgiou et al (US patent 6047248).

AAPA in view of Chapuis does not teach any clock input.

Art Unit: 2116

Georgiou et al teach a microcomputer (100 and 102) comprising clock input terminal (425 is inputted to 100. There must be a clock input terminal) to which external clock signal is input (435 is the master clock or external clock signal); a frequency divider dividing the frequency by two (442); a selector (470) for selecting external clock (440) or the divided clock (452) depending on a control information (465) from register (460) and supplying it to the microcomputer (425 is provided to functional unit that is part of microprocessor)

It would have been obvious for an ordinary skill in the art at the time the invention was made to combine the teachings of AAPA, Chapuis, Georgiou et al. One ordinary skill in the art would have been motivated to have the clock structure, since that would provide the necessary clock control.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fahmida Rahman whose telephone number is 571-272-8159. The examiner can normally be reached on Monday through Friday 8:30 - 5:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on 571-272-3670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2116

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fahmida Rahman  
Examiner  
Art Unit 2116

\*\*\*



**LYNNE H. BROWNE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**